

RESPONSE

Applicant notes that Examiner has withdrawn his rejection under 102(a) and 102(e) of claims 92, 93, 95, 97 and 100-102 as anticipated by Blanc et al. in view of amendments filed by Applicant on July 2 and October 9, 2007.

Examiner has entered a new rejection of the claims under 103(a), citing Blanc et al in combination with a newly cited reference, Weinshilboum et al. Examiner asserts that steps a), b), c), d) and e) of claim 92 of the instant invention are described by Blanc et al. except for the element of multiple reading frames, which is described in Weinshilboum et al. However, as discussed below, Blanc et al. does not describe steps a), b), c), or e) of claim 92, whether for single or for overlapping reading frames. Furthermore, Weinshilboum et al. does not describe overlapping reading frames.

REMARKS

Blanc et al. does not describe steps a), b), c), or e) of claim 92.

Examiner asserts that step a) of claim 92 "is described in Example 1, column 9, lines 30-62 and Example 6, column 39, lines 45-51" of the Blanc et al. patent. Example 1 describes the isolation of total genomic DNA from mycelia of *S. pristinaespiralis*. However the sequence of this DNA was entirely *unknown* - i.e., it was not a "*defined DNA sequence*" as provided for in step a). Hence this example does not describe step a). Example 6 describes the isolation of cosmids from *S. pristinaespiralis* DNA (of undefined sequence) that might contain genes of interest. Hence this example also does not describe step a). Indeed the motivation for isolating the cosmids is given by Blanc et al. as: "in order to be able to deduce *subsequently* the nucleic acid sequence of the genes." This clearly indicates that the sequence was undefined at the time; in fact Blanc et al. subjected portions of particular cosmid clones to dideoxy DNA sequencing only *after* it was shown that those clones contained the genes of interest. Thus Examiners

conclusion that "consequently, Blanc et al. teaches a polynucleotide having homology to a defined DNA sequence" is false and unjustified by the facts.

Examiner asserts that step c) of claim 92 "is described in Blanc et al. examples 5.1.1.B and 5.1.2 (columns 14 and 15)." Example 5.1.1.B describes the purification of a two-subunit enzyme from *S. pristinaespiralis* cells. Example 5.1.2 describes the N-terminal sequencing of each of the subunits. It also describes the sequencing of an internal tryptic peptide from each subunit, and the synthesis of two sets of degenerate oligonucleotides that could encode a portion of each subunit. However, the enzyme was *not* expressed from a polynucleotide having homology to a *defined DNA sequence* as provided for in step c) since the sequence *was not known* at the time. Nor was the enzyme expressed from two or more overlapping reading frames, as provided for in step c). Hence Blanc et al. does not describe step c) of claim 92 which provides for "expressing two or more polypeptides from two or more reading frames of said [*defined*] polynucleotide, thereby creating two or more expressed polypeptides."

Examiner asserts that "steps b), d) and e) are described Blanc et al. column 46, lines 54-58 and 61-65, which state 'Frames 1 and 3 correspond respectively to the proteins SnaA and SnaB isolated above as described in Example 5. and for which the cloning of the genes is detailed in Example 6..... Moreover, the molecular masses calculated from the sequences are comparable to the apparent molecular masses of the proteins snaA and snaB, estimates, respectively, in SDS-PAGE as described in example 5.'" However, Blanc et al. does not describe steps b) or e) of claim 92 because in step b) a *defined DNA sequence* (not an undefined sequence as in Blanc et al.) is used to obtain a set of *predicted* mass values, and in step e) the *predicted* mass values are compared to measured mass values. Thus Blanc et al. does not describe step b) which provides for "calculating the masses of two or more polypeptides encoded in two or more overlapping reading frames of said *defined DNA sequence* thereby obtaining a set of *predicted* mass values, nor does Blanc et al. describe step e) which provides for "comparing said set of *predicted* mass values to said set of measured mass values". Indeed, since the predicted mass values of claim 92 cannot be obtained except from a *defined DNA sequence*, and

since *Blanc et al* did not possess a defined DNA sequence, they could not have performed steps b) or e).

Weinshilboum et al. does not describe overlapping reading frames.

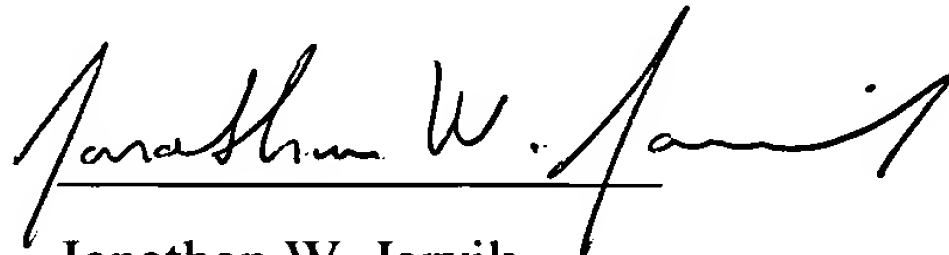
Examiner asserts that "Figure 4 of Weinshilboum et al. illustrates overlapping reading frames of DNA within human colon carcinoma cells." However Weinshilbaum et al. makes no reference to overlapping reading frames. Figure 4 represents a cDNA molecule. The arrows, some of which overlap, represent DNA primers that were used to sequence the cDNA, *not* overlapping reading frames.

Since Weinshilboum et al. does not describe overlapping reading frames, it clearly cannot be used to support a 103 rejection based on its description of overlapping reading frames. But there is a larger issue here. Prior art describing overlapping reading frames has been of record in the instant application since the first international search report was issued in 2000: over seven years ago, and five years before the *Ex parte Quayle* action of March 29, 2005 wherein the claims were accepted by the PTO. Since overlapping reading frames are already of record in the prior art for this patent prosecution, addition of the Weinshilboum citation would be superfluous even if it did describe overlapping reading frames.

CONCLUSION

In view of the facts and analyses presented above, Applicant submits that the prior art cited by the examiner does not describe the claims of Applicant's invention, nor would the prior art make the invention obvious to a person skilled in the art. Applicant therefore respectfully requests withdrawal of the rejections and allowance of claims 92-102.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan W. Jarvik", written over a horizontal line.

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